

Work Order ID 57622

April 12, 2010 8:50:35 AM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 12/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 04/05/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

PL

Date: 10-4-12

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2580

Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

N/A *HJ*

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bender

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

) 11/04/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

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[illegible]

1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved.

2. The second step is to define the requirements. This involves determining what the system needs to do and what it must be able to handle.

3. The third step is to design the system. This includes creating a detailed plan of how the system will be built and how it will be tested.

4. The fourth step is to implement the system. This involves building the system according to the design and testing it to ensure it works as intended.

5. The fifth step is to maintain the system. This involves keeping the system up-to-date and ensuring it continues to work properly over time.

[illegible]

Customer:

Reference:

Abstract



Insp. Stamp

[illegible]

0.00

4- Scribe batch number insied aft end of tube.

0.00

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R□□□ Aluminum Rod

M113207

BE 10/04/26

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R□□□ Aluminum Rod

M113207

BE 10/04/26

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web. Debur

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Debur holes

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

Dart Aerospace Ltd

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00	Sobolubz				_____	_____	_____
160 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	Sobolubz					_____	_____
170 HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.	0.00 0.00					_____	_____	_____

① BR 10-4-08

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: 2:45pm OVEN TEMPERATURE: 320°F FINISH TIME: 3:15pm	0.00 0.00				1	0		
190 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							

⇒ 10/04/26

⇒ m. 10/04/29

(IX)

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

200

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates.

A/R ☐ ☐ ☐ Sikaflex-291 ☐ ☐ ☐ ☐

Sikaflex expire date: _____

M112429
10/08

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R ☐ ☐ ☐ Sikaflex-291 ☐ ☐ ☐ ☐

Sikaflex expire date: _____

M112429
10/08

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch:

M11354 S

M-H

10/04/29



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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/04/30

Memo

0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

④

220



Packaging

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location:

PPP Rev: PPA 56791

10/05/30

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/05/04

u 10/05.04

W/O:		WORK ORDER CHANGES					
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 IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD
 IPP Rev. O 06.02.28 Added paperwork EC
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Date: 12/04/2010

Required Date: 04/05/2010

Start Qty: 1.00

Required Qty: 1.00

D2580-1 Manufactured No 110 Each 5.0000 1.0000



205 Skidtube bent detail

B-57437 MB 10-04-22

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
LG	5	
56975	2	
57028	2	
57188	1	

D2576-3 Manufactured No 140 Each 121.0000 1.0000



Step (maching detail)

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
LG	121	
46661	73	
52215	48	

BE 10/04/26

D2579 Manufactured No 140 Each 113.0000 20.0000



Crossbolt Spacer

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse		
LG	113	
57052	113	

20 BE 10/04/26

W/O:		WORK ORDER CHANGES					
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 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D2855 Manufactured No 200 Each 119.0000 1.0000



Cap



Warehouse Loc Qty Loc Code
Location

Main Warehouse

FP6 2

56613 2

Main Warehouse

ST026 117

50513 1

50770 30

51539 32

53791 54

AN3-5A Purchased No 200 Each 1,021.000 2.0000



Bolt



Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST350 1021

105057 1021

1x m-h
12/04/2010

2x m-h
12/04/2010

April 12, 2010 8:50:40 AM

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 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Date: 12/04/2010

Required Date: 04/05/2010

Start Qty: 1.00

Required Qty: 1.00

AN960JD10L

Purchased

No

200

Each

4,685.000

2.0000



Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST348

4685

110985

4685

200

Each

409.0000

50.0000

ALS7-1032-130

Purchased

No



Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST282

409

113238

409

200

Each

1,499.000

50.0000

AN3C4A

Purchased

No



BOLT

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST350

1499

113226

98

114103

501

114108

400

114330

500

w/04/2a

2x m-k

m-k 10/04/2a
SUX

50 m-k
w/04/2a

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Start Date: 12/04/2010

Required Date: 04/05/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L	Purchased	No	200	Each	0.0000	50.0000
washer						
D3566-13	Manufactured	No	200	Each	53.0000	1.0000
Gasket						

NAS1149C0332R

M114341

50X m-h w/04/29

Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

FP

53461

53

53

200

Each

11.0000

1.0000

1X m-h w/04/29

D3566-5	Manufactured	No
Gasket		

Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

FP015

56829

11

11

200

Each

22.0000

2.0000

1X m-h w/04/29

D3566-1	Manufactured	No
Gasket		

Warehouse	Loc Qty	Loc Code
Location		

Main Warehouse

FP015

57257

B57257

B57715

1X m-h w/04/29
 1X m-h w/04/29

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Start Date: 12/04/2010

Required Date: 04/05/2010

Start Qty: 1.00

Required Qty: 1.00

D3564-11

Manufactured No

200

Each

1.0000

1.0000



Wearshoe

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

B57259

FP19

1

56834

1

D3564-13

Manufactured No

200

Each

22.0000

1.0000



Wearshoe

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

4

56285

4

Main Warehouse

FP17

18

56533

18



IX m-l
w/04/2010

IX m-l
w/04/2010

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 IPP Rev: P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-9 Manufactured No 200 Each 13.0000 1.0000



Wearshoe



Warehouse Loc Qty Loc Code
Location

Main Warehouse

FP

1

55334

1

Main Warehouse

FP019

12

57260 ✓

12

D3564-5 Manufactured No 200 Each 13.0000 1.0000



Wearshoe



Warehouse Loc Qty Loc Code
Location

OFFSHORE

FG

2

34806

2

Main Warehouse

FP

11

55024

1

55333

10

B 57525

12 m-h 10/04/2010

12 m-h 10/04/2010

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Start Qty: 1.00

Required Qty: 1.00

D2594-3 Manufactured No 200 Each 220.0000 16.0000



O-Ring, 205 Skidtube

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP

220

55546 ✓

220

200

Each

427.0000

16.0000

m-h
16X
6/04/29

D2594-1



Plug, 205 Skidtube

Manufactured No

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP

427

42807 ✓

112

55002 ✓

315

m-h
16
6/04/29

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. 0 SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

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07-06-28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

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WORK ORDER
NO. *57622*

BS 10-4-12

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Diagram illustrating the grinding locations for the D2576-3 Step component. The component is an elongated oval shape with a central hole. The grinding locations are indicated by arrows and labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576

DRILL PRIOR TO D2855 CAP
INSTALLATION (2 PLACES)

Ø0.208

AN3-5A BOLT (1)
AN960/D10L WASHER (1)
(2 PLACES)

D2855 CAP

SEAL WITH
SIKAFLEX-241/-291

0.40

D2579 SPACER

D2596 WEB (REF)

ALST-1032-130 (REF)
(TYP 50 PLACES)

AFTER PERFOR

1. CHA
2. INS
3. C'B
4. C'W

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø.437 X 1.00 DEEP

[illegible]

Figure 1: Elevation view of the test track. The diagram shows a cross-section of a track with a central horizontal section and two curved sections at the ends. Key dimensions include a 1.4m offset on the left, a 1.0m distance between the hole and the tangent point on both sides, a 13.4m distance from the left hole to the start of the curve, a 20.0m distance from the right hole to the start of the curve, a 32.0 ± 1.0m distance from the right hole to the end of the track, and a 1.0m offset on the right. A 4m wide section is indicated at both ends. A 0.640m dimension is shown for the right curve.

WELD AS PER DETAIL B

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

0.5 1.5 1.5 D

8

1.5 1.5 1.5

P P P P P P P

REFER TO DETAIL C

D3566-1 D3566-5 D3566-1 D3566-13

D3564-11 D3564-5 D3564-9 D3564-13

AN3C4A BOLT (1)
AN960C10L WASHER (1)
(50 PLACES)

DESIGN	7	DRAWN BY	
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i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

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DART		DART AEROSPACE LTD. HAMKESBURY, ONTARIO, CANADA	
DRAWING NO. D2580		REV. 1 SHEET 2 OF 3	
TITLE 205 SKIDTUBE ASSEMBLY		SCALE 1:2	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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07 Dec 28

Diagram illustrating the grinding locations on a propeller cross-section:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- LOCATION RIDGE ON UNDERSIDE OF D2576
- GRIND FLUSH

Technical drawing of a circular component with various fasteners and dimensions. The drawing includes the following labels and dimensions:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)
- #0.208
- SEAL WITH SIKAFLEX-241/-291
- AN3-5A BOLT (1)
- AN980JD10L WASHER (1)
- (2 PLACES)
- D2855 CAP
- SEE NOTE ii)
- 0.40

Diagram illustrating the assembly of the D2579 Spacer. The assembly consists of a central web (D2596 WEB (REF)) and a spacer (D2579 SPACER). The spacer is shown with a central hole and two side holes. The web is shown with a central hole and two side holes. The assembly is labeled with dimensions and part numbers.

Labels in diagram:

- D2579 SPACER
- D2596 WEB (REF)
- ALS7-1032-130 (REF) (TYP. 50 PLACES)

Instructions:

AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO 0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE
WITH THE SPACER AT THIS LOCATION

37.50
DISTANCE TO AFT END
OF D2598 WEB

3
7

1.750 1.750

0.508 (TYP.)
(40 PLACES)

REFER TO DETAIL E

REFER TO DETAIL A

8.750
17.375
26.000
34.188

57.313 (REF)
7 EQUAL SPACES
8.188 PITCH

38.0 91.500

190.0
(D2500-1)

[illegible]

WELD AS PER DETAIL F

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

NO C'BORE NO PLUG

REFER TO DETAIL G

8

D3566-1, **D3566-5**, **D3566-1**, **D3566-13**

D3564-11, **D3564-5**, **D3564-9**, **D3564-13**

AN3C4A BOLT (1)
AN960C10L WASHER (1)
(50 PLACES)

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DRAWING NO.	02580
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REV. 0
SHEET 3 OF 3

205 SKIDTUBE ASSEMBLY

REV. 0
3 OF 3
SCALE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 220

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barday Elliott
Job number: 57683
Part number: D205-634.041
Description: 205 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier [Signature] Date of Test Coupon 10.04.27

Welder [Signature] Date of Test Coupon 10.04.27

The above named individual is qualified in accordance with AWS D17.1.2001 to weld